

In Journ. Washington Acad. Sciences, VI: 109 (1916) I described what purported to be a lower Cretaceous Flora in Colorado. The only species I definitely identified was *Matonidium althausii*, a well-known Lower Cretaceous fern. Some additional evidence came to light, and in view of the apparent complications it was thought well to refer the material to Dr. Berry, who published a very valuable article in Bull. Torrey Bot. Club, 46: 285. Berry concludes that the *Matonidium* is a distinct species, which he names *M. americanum*. With this decision I have no quarrel, but I call attention to the subject to illustrate an unfortunate tendency in paleontology to convert suggestions into positive statements in quotations. Berry states that my plants came from "the supposed McElmo," but I said the deposit was "above the McElmo." A fossil which Berry (no doubt correctly) considers to represent the apical part of a *Matonidium* stipe, I said closely resembled *Cycadospadix*. Berry says twice that I "referred" it to *Cycadospadix*. Knowlton, in his list on p. 732, cites from my paper without any query *Equisetum burchardti* and *Sapindopsis variabilis*, but in the main list a query is given with the latter. I said, "stems . . . may well represent the species *Equisetum burchardti*, but the sheaths are unfortunately wanting," and "leaves . . . may well belong to" *Sapindopsis variabilis*, "although the lateral veins appear to form a more acute angle with the midrib than in that species as figured by Berry." Berry thinks both suggested identifications are wrong, so my cautious language was justified. In nearly all paleobotanical work there is necessarily a considerable margin of error, so that when hesitation or doubt appears it should never be converted without investigation into apparent certainty.

T. D. A. COCKERELL

Brown's "Forest Products"*

Botany is the foundation of all sciences dealing with plants. Agriculture and forestry are but applied botany. Brown's "Forest Products" will interest botanists and all those who like

* Brown, Nelson C., "Forest Products, Their Manufacture and Use," xix + 471 pages, frontispiece and 120 figures. John Wiley and Sons, New York, 1919. Net \$3.75.

to know where the articles they use come from and how they are made. To foresters this book will be essential because effective forest management requires knowledge of the ultimate forest product, and of how that product is worked up and used.

Trees are among the plants most useful to man. Yet how many botanists know the principal uses of trees, aside from lumber? How many realize that the wood of the chestnut (*Castanea dentata*) is used not only for lumber, railroad ties, and "snake" fences such as Lincoln made in his youth, but produces more than two thirds of the tannic acid products made in the United States?

Brown gives clear and readable accounts of the history, process of manufacture and uses of the principal forest products aside from lumber. In the chapter under "Wood Pulp and Paper" he states that the Chinese, and not the Egyptians, as we had supposed, must be credited with the first manufacture of paper. About eighty to eighty-five per cent of all the paper used in this country is now made from wood, whereas before the middle of the nineteenth century paper was made entirely from other vegetable fibers. The increase in the quantity of wood used for paper has been enormous, over three hundred per cent between 1900 and 1919. The supply of the most desirable wood, spruce, is diminishing so rapidly that other woods are being studied as substitutes, and paper mills are being forced to move out of the country. Brown gives in detail the various processes of making paper.

Of special interest, particularly to foresters, is the information on sources of supply with relation to the present and future forest resources of the country. Naval stores (turpentine and rosin) are doomed to virtual disappearance in a short while owing to the ruthless destruction by lumbering and fire of the longleaf pine forests from which these important materials are derived.

Each product is covered in an interesting and thorough manner. These products are: Wood pulp and paper, tanning materials, veneers, slack cooperage (barrels not for liquids), tight cooperage (barrels to hold liquids), naval stores, hardwood distillation (produces charcoal, acetate of lime, wood alcohol and

other materials), softwood distillation, charcoal, boxes, cross ties, poles and piling, posts, mine timbers, fuelwood, shingles, maple syrup and sugar, rubber, dye woods and materials, excelsior, and cork. Numerous well-selected illustrations and an index add to the attractiveness and usefulness of the book.

BARRINGTON MOORE

PROCEEDINGS OF THE CLUB

NOVEMBER 29, 1919

The meeting was held in the Morphological Laboratory of the New York Botanical Garden at 3.30 P.M. Dr. Marshall A. Howe presided. There were eighteen persons present. The minutes of the previous meetings were read and approved. Mrs. Helen S. Harper, 417 Riverside Drive, and Mr. H. E. Thomas, graduate student, Columbia University, were nominated for membership.

Dr. Howe reported for the editorial board regarding the proposition to publish the Torrey-Schweinitz letters as a memoir of the Club, stating that suitable financial arrangements were being made and the publication of this memoir was assured.

The treasurer announced a contribution of \$100 from Dr. J. H. Barnhart to the Underwood Fund.

Dr. Levine spoke of business connected with the *Bulletin* and moved to authorize the chairman to appoint a committee to investigate the various activities of the Club with special regard to retrenchment along certain lines with a view to improving the *Bulletin*. The chairman appointed Professor Harper, Dr. Britton, Dr. Dodge, Dr. Levine, Mr. Taylor, and Professors Hazen and Broadhurst members of this committee.

The secretary announced the death of Mrs. R. McM. Colfelt, who has in the past generously contributed to the support of TORREYA.

The scientific program was then in order. Dr. A. B. Stout spoke on "Notes on Forced Bulbs." "Dr. Stout made a report of observations on the behavior of bulbous plants which have been forced. In the winter of 1916-1917 about 100 bulbs of *Narcissus*